REMARKS

Reconsideration and allowance of this application are respectfully requested in light of the above amendments and the following remarks.

Claims 1-23, 25-27, and 31-32 have been amended, and claims 24 and 28-30 have been cancelled without prejudice or disclaimer. Support for the amendments can be found, for example, at paragraph [0027] of the specification. No new matter is entered. (It should be noted that references herein to the specification and drawings are for illustrative purposes only and are not intended to limit the scope of the invention to any particular aspect of the referenced embodiments.)

Claims 1-16 and 23-31 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Dehner et al (2003/0035464 A1) (hereinafter, "Dehner"). Claims 17-22 stand rejected under 35 U.S.C. § 102(b) as being unpatentable over Knauerhase et al. (2003/0163579 A1) (hereinafter, "Knauerhase"). It is further noted that new claim 32 was added by preliminary amendment on December 18, 2009, and that the Office Action has not yet addressed the patentability of this claim. Accordingly, it is respectfully requested that claim 32 be considered in the next Office Action.

It is respectfully submitted that the rejections of claims 1-31 should be withdrawn for at least the following reasons.

By way of review, in the methods and apparatuses recited by claims 1-32, it is presumed that a Wireless Access Point (WAP) does not have complete functionality defined for a wireless local area network, and instead has only a subset of complete functionality. Therefore, the methods and apparatuses recited by claims 1-32 have as an objective to provide complementary

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functionality to a WAP which has only a subset of complete functionality to form complete functionality.

In the methods and apparatuses recited by claims 1-32, it is presumed that each WAP has a different set of functional components. Similarly, each Control Node (CN) has a different set of functional components. Therefore, an important purpose of the methods and apparatuses recited by claims 1-32 is to provide complementary functionality to a WAP from some other network entity, such that the WAP is enabled to provide services in the wireless local area network, given that the WAP does not have complete functionality defined for the wireless local area network.

Also, in the methods and apparatuses recited by claims 1-32, the term "providing complementary functionality" can be understood to mean providing some functionalities which a given WAP does not have from another entity which has those functionalities. (See the Specification, paragraph [0027]). More specifically, the term "providing complementary functionality" can be understood to mean providing service in a wireless local area network to a radio communication terminal by forming complete functionality defined for the wireless local area network by negotiation and cooperation between WAPs, between a WAP and a CN, and so on.

Claims 1-8, 12 and 23

By way of review, according to Dehner, all Network Access Points ("NAP", see FIG. 1, 103 and 105) have the same and complete functionality. Dehner discloses shifting a NAP, which provides a service to a Communication Unit ("CU", see FIG. 1, 111) to another NAP based on the received signal strength (RSSI) or load.

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On the contrary, according to the "system for providing service in a wireless local area network" defined by claim 1, a WAP has a subset of complete functionality and a CN provides complementary functionality for each of the WAPs. Specifically, the system of claim 1 recites the feature of:

> "...the control node negotiates with the single or plurality of WAPs using the negotiation unit and provides complementary functionality for the single or plurality of the WAPs to form a complete functionality defined for the wireless local area network according to a decision of the negotiation unit (emphasis added)."

As a result of this and other recited features, the system of claim 1 solves various problems associated with the prior art, including the problem of incompatibility of WAPs of different functionalities, WLAN operations in dynamic topology environments, and accommodating dissimilar volumes of processing loads over time. Specification, par. [0040].

Dehner fails to disclose, either expressly or inherently, each of the recited features of claim 1. For example, Dehner discloses that a provider to provide some functionality to a radio communication terminal is shifted from one NAP to another NAP, but fails to disclose that a CN provides complementary functionality for each of the WAPs by providing functionality to a WAP which the WAP does not have. Although the Office Action cites to paragraphs [0019], [0020] and [0039] of Dehner to anticipate these recited features of claim 1, none of these paragraphs disclose, either expressly or inherently, these features. Instead, these paragraphs simply refer to how a radio communication terminal may be shifted from one NAP, e.g., NAP 203 (FIG. 1), to another NAP, e.g., NAP 205 (FIG. 1).

Therefore, Dehner fails to disclose, either expressly or inherently, each of the features recited by claim 1, and the rejection of claim 1 and all dependent claims therefrom should be withdrawn for at least this reason.

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Claim 23 recites substantially similar features to the features recited by claim 1 discussed above. Accordingly, it is respectfully submitted that the rejection of claim 23 should be withdrawn for substantially the same reasons that the rejection of claim 1 should be withdrawn.

<u>Claims 9-11</u>

According to the "system for providing service in a wireless local area network (WLAN)" recited by claim 9, a first wireless access point processes a data packet from a mobile terminal by a predetermined subset of functionality and exchanges the processed data packet with a second wireless access point, and then the second wireless access point processes the data packet received from the first wireless access point by complementary functionality, whereby the data packet can be processed by complete WLAN functionality.

On the contrary, as explained above, Dehner discloses that a provider to provide some functionality to a radio communication terminal is shifted from one WAP to another WAP. However, Dehner fails to disclose that a plurality of wireless access points cooperatively provide complementary functionality with a subset of complete functionality defined for the wireless local area network. Thus, Dehner fails to disclose, either expressly or inherently, each of the recited features of claim 9, including, for example, the features of: "...wherein <u>each of the WAPs</u> <u>further processes the processed data units received from other WAPs with complementary</u> <u>functionality</u> among the subset of defined WLAN functions..." and "...whereby a data unit for a mobile terminal is processed with complete WLAN functions by a plurality of said WAPs," as recited by claim 9.

The Office Action alleges that paragraph [0047] of Dehner discloses the feature of "...whereby a data unit for a mobile terminal is processed with complete WLAN functions by a plurality of said WAPs," among other features recited by claim 9. Paragraph [0047] of Dehner

discusses how "[t]he CU 111 or 211 [FIG. 3] is suited for the received to receive from either the first NAP 103, 203 or the second NAP 105, 205, a message instructing the CU to establish a second connection using the second frequency hopping pattern with the second NAP 305." However, nothing in this paragraph discloses, either expressly or inherently, that a "data unit for a mobile terminal is processed with complete WLAN functions by a plurality of said WAPs," as recited by claim 9. Instead, the paragraph simply relates to how the CU may establish a second connection with the second NAP 305.

Therefore, Dehner fails to disclose, either expressly or inherently, each of the features recited by claim 9, and the rejection of claim 9 and all dependent claims therefrom should be withdrawn for at least this reason.

Claims 13, 14 and 32

Claim 13 is directed towards a "method for providing service in a wireless local area network (WLAN) that allows a defined WLAN function split between a wireless access point (WAP) and a single or plurality of Control Nodes (CN)" and recites the technical feature of "...the WAP discovers CNs that may provide complementary WLAN functions (emphasis added)."

The Office Action alleges that FIG. 7 of Dehner discloses this recited feature of claim 9. Office Action, pg. 6. However, FIG. 7 of Dehner discloses a method where a NAP stores IDs of each neighbor NAP to which handoff service can be shifted based on received signal strength (RSSI) or load. Thus, FIG. 7 fails to disclose that a NAP discovers a neighboring NAP that "...may provide complementary WLAN functions," as recited by claim 7.

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Therefore, Dehner fails to disclose, either expressly or inherently, each of the features recited by claim 13, and the rejection of claim 13 and all dependent claims therefrom should be withdrawn for at least this reason.

Claim 32 recites substantially similar features to the features recited by claim 9 discussed above. Accordingly, it is respectfully submitted that the rejection of claim 32 should be withdrawn for substantially the same reasons that the rejection of claim 1 should be withdrawn.

Claims 15 and 16

Claim 15 is directed towards a "method for providing service in a wireless local area network (WLAN) that allows a defined WLAN function split between wireless access point (WAP) and a single or plurality of Control Nodes (CN)" and recites the technical feature of "...a CN dynamically discovers a capability of a WAP by sending a single or plurality of messages to the WAP, each of the messages containing a section that emulates a data unit sent by a mobile terminal." This feature is necessary for the CN to know each WAP's functionality, since it is assumed that each WAP has a different set of functional components (e.g., WAPs are manufactured by various vendors).

On the contrary, it is assumed in Dehner that all WAPs have the same and complete functionality. Therefore, Dehner fails to disclose the recited feature of "...a CN dynamically discovers a capability of a WAP by sending a single or plurality of messages to the WAP, each of the messages containing a section that emulates a data unit sent by a mobile terminal."

The Office Action alleges that this above-recited feature of claim 15 is disclosed at par. [0019] of Dehner, and more specifically, that the "respond with message" disclosed in par.

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[0019] reads on the messages sent to the WAPs in claim 15. However, nothing in paragraph [0019] indicates that the "respond with message" has a section that "emulates a data unit sent by a mobile terminal," as recited by claim 15.

Therefore, Dehner fails to disclose, either expressly or inherently, each of the features recited by claim 15, and the rejection of claim 15 should be withdrawn for at least this reason.

Claim 16 recites the technical feature of "...a CN obtains a capability of the WAP." As explained above with respect to claim 15, Dehner fails to teach or suggest this recited feature of claim 16 because in Dehner, it is assumed that all WAPs have the same and complete functionality. Accordingly, it is respectfully submitted that the rejection of claim 16 should be withdrawn for substantially the same reasons that the rejection of claim 15 should be withdrawn.

Claims 17-22

Claim 17 is directed towards a "method for carrying out load balancing in a wireless local area network (WLAN) without requiring a mobile terminal to change an association relationship with a wireless access point (WAP)" and recites the feature of: "...said WAP tunnels a data unit from a mobile terminal to the said another WAP through the tunnel after processing said data unit with functions of the association specific part."

By way of review, Knauerhase discloses a technology for adaptive load-balancing by increasing a beacon interval corresponding to a first access point in order to detract clients. (Knaurhase, Abstract). However, Knauerhase fails to disclose the feature of "...said WAP tunnels a data unit from a mobile terminal to the said another WAP through the tunnel after processing said data unit with functions of the association specific part," as recited by claim 17.

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The Office Action, page 9, alleges that Knauerhase discloses this recited feature at par. [0028], which describes how a "beacon interval" of "at least one second access point in the network may optionally be decreased." However, nothing in paragraph [0028] discloses, or even relates, to the recited feature of a WAP that "tunnels a data unit from a mobile terminal to the said another WAP through the tunnel after processing said data unit with functions of the association specific part," as recited by claim 17. Paragraph [0028] of Knauerhase does not even mention a tunnel, nor does it mention that a WAP processes a data unit with functions of an association specific part.

Therefore, Knauerhase fails to disclose, either expressly or inherently, each of the features recited by claim 17, and the rejection of claim 17 and all dependent claims therefrom should be withdrawn for at least this reason.

Claims 25-27 and 31

Claim 25 is directed towards a "method for accommodating variances in a wireless network topology" and recites the feature of "…dynamically adapting an operations logic of at least one network entity of said wireless network topology to alter processing of one or more functional sub-components." Thus, claim 25 is related to accommodating variances in a network topology or determining a network topology.

Dehner fails to disclose to accommodate variances in a network topology or determine a network topology.

The Office Action alleges that Dehner discloses this recited feature at paragraphs [0012] and [0047]. However, neither paragraph [0012] nor [0047] mention accommodating variances in

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a network topology, or otherwise determining a network topology. Furthermore, neither paragraph [0012] nor [0047] disclose, either expressly or inherently, the recited feature of altering "processing of one or more functional subcomponents," as recited by claim 25. Instead, par. [0012] describes how the disclosure of Dehner relates to providing "continuous service to communication units (CUs) operating therein or therewith," but makes no mention of altering the processing of one or more functional subcomponents. Par. [0047] describes how the CU 111 "is suited for the received to received from either the first NAP 103, 203 or the second NAP 105, 205, a message instructing the CU to establish a second connection using the second frequency hopping pattern with the second NAP 305." Again, this paragraph of Dehner does not disclose, either expressly or inherently, the recited features of claim 25.

Therefore, Dehner fails to disclose, either expressly or inherently, each of the features recited by claim 25, and the rejection of claim 25, and all dependent claims therefrom should be withdrawn for at least this reason.

Claim 31 recites the feature of "a first network entity alters a connectivity association with a second network entity by including one or more third network entities in a communication path of an alternate connectivity association." As explained above with respect to claim 25, Dehner does not disclose this recited feature. Accordingly, the rejection of claim 31 should be withdrawn for substantially the same reasons that the rejection of claim 25 should be withdrawn.

In view of the above, it is submitted that this application is in condition for allowance and a notice to that effect is respectfully solicited.

If any issues remain, which may best be resolved through a telephone communication, the Examiner is requested to telephone the undersigned at the local Washington, D.C. telephone number listed below.

Respectfully submitted,

/James Edward Ledbetter/

Date: June 28, 2010
JEL/DEA/att

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